

CLAIMS

1. A graft copolymer containing polyorganosiloxane obtained by polymerizing,
 - 5 0 to 10 parts by weight of a vinyl monomer (B) comprising 100 to 20 % by weight of a multi-functional monomer containing at least two polymerizable unsaturated bonds in a molecule (b-1) and 0 to 80 % by weight of another copolymerizable monomer (b-2) and
 - 10 5 to 70 parts by weight of a vinyl monomer (C),
 - 15 in the presence of 30 to 95 parts by weight of polyorganosiloxane in a latex state (A), so that the total amount of polyorganosiloxane (A), vinyl monomer (B) and vinyl monomer (C) becomes 100 parts by weight.
2. The graft copolymer containing polyorganosiloxane of Claim 1, wherein polyorganosiloxane (A) is obtained by seed polymerizing organosiloxane using a seed polymer that is swelled by organosiloxane.
- 20 3. The graft copolymer containing polyorganosiloxane of Claim 2, wherein the particle size of said seed polymer is 0.001 to 0.03 μm .
- 25 4. The graft copolymer containing polyorganosiloxane of Claim 2, wherein T_g of said seed polymer is at most 0°C.
5. The graft copolymer containing polyorganosiloxane of

Claim 2, wherein the proportion of said seed polymer to polyorganosiloxane (A) is 0.1 to 10 % by weight.

6. The graft copolymer containing polyorganosiloxane of
5 Claim 2, wherein the swelling volume ratio of said seed polymer is 3 to
50 times.

7. The graft copolymer containing polyorganosiloxane of
Claim 2, wherein the swelling volume ratio of said seed polymer is 5 to
10 25 times.

8. The graft copolymer containing polyorganosiloxane of
Claim 1, wherein vinyl monomer (C) is at least one monomer selected
from the group consisting of an aromatic vinyl monomer, a cyanized
15 vinyl monomer, a (meth)acrylic ester monomer and a vinyl monomer
containing a carboxyl group.

9. The graft copolymer containing polyorganosiloxane of
Claim 1, wherein a radical polymerization initiator (D) having solubility
20 to water of 0.5 to 10 g/100 g (20°C) and hydrogen drawing properties
of 10 to 30 % is used when polymerizing vinyl monomer (B) and/or
vinyl monomer (C).

10. The graft copolymer containing polyorganosiloxane of
25 Claim 1, wherein polyorganosiloxane (A) is modified by a grafting agent
(E).

11. The graft copolymer containing polyorganosiloxane of
Claim 10, wherein the amount of grafting agent (E) is 0.1 to 10 parts
by weight based on 100 parts by weight of polyorganosiloxane (A).

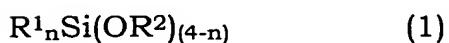
5 12. The graft copolymer containing polyorganosiloxane of
Claim 10, obtained by reacting polyorganosiloxane (A), which is
modified by grafting agent (E), with grafting agent (F) and then
polymerizing vinyl monomer (B) and vinyl monomer (C).

10 13. The graft copolymer containing polyorganosiloxane of
Claim 12, wherein the reaction temperature of grafting agent (F) and
vinyl monomer (B) is 20 to 60°C.

14. A flame retardant comprising the graft copolymer
15 containing polyorganosiloxane of Claim 1.

15. A resin composition comprising 0.1 to 20 parts by
weight of the flame retardant of Claim 14 based on 100 parts by weight
of thermoplastic resin.

20 16. A process for preparing an emulsion of
polyorganosiloxane which comprises
obtaining polyorganosiloxane (H) by emulsion polymerizing cyclic
organosiloxane under acidic conditions of pH of at most 5; and
25 adding condensation reactive organosilane represented by formula (1):



(wherein R¹ represents an organic group, R² represents a hydrogen atom or an alkyl group having 1 to 5 carbon atoms, n represents an integer of 0 to 3)

or a partially hydrolyzed condensate thereof (I).

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17. The process for preparing an emulsion of polyorganosiloxane of Claim 16, wherein 0.1 to 50 parts by weight of condensation reactive organosilane or partially hydrolyzed condensate thereof (I) is added based on 100 parts by weight of polyorganosiloxane
10 (H) and reaction is conducted at a temperature of 30 to 95°C under acidic conditions of pH of at most 5.

18. The process for preparing an emulsion of polyorganosiloxane of Claim 17, wherein the temperature of polyorganosiloxane (H) when adding condensation reactive organosilane or partially hydrolyzed condensate thereof (I) is 10 to 50°C.
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19. The process for preparing an emulsion of polyorganosiloxane of Claim 16, wherein polyorganosiloxane (H) is obtained by polymerizing 100 parts by weight of cyclic organosiloxane and 0.01 to 20 parts by weight an alkoxy silane compound having a radical-polymerizable functional group in a molecule (J).
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25 20. The process for preparing an emulsion of polyorganosiloxane of Claim 16, wherein polyorganosiloxane (H) is obtained by emulsion polymerizing under acidic conditions and then

aging at a temperature of 10 to 50°C for at least 6 hours.

21. The process for preparing an emulsion of polyorganosiloxane of Claim 19, wherein said radical-polymerizable functional group of alkoxy silane compound (J) is at least one 5 functional group selected from the group consisting of a (meth)acryloyloxy group, a mercapto group, a vinyl group and a styryl group.

22. A graft copolymer containing polyorganosiloxane 10 obtained by polymerizing 5 to 70 parts by weight of a vinyl monomer based on 95 to 30 parts by weight of polyorganosiloxane particles in the emulsion of polyorganosiloxane obtained by the process of Claim 16, so that the total amount becomes 100 parts by weight.